

Refining of compounds by zone melting

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AB An app. for simultaneous zone melting and melt electrolysis consists of a wheeled mobile tank for the refined material with an elec. conductive bottom as a cathode, a 2nd electrode or several electrodes, and one or several heating elements (e.g. a funnel furnace) and cooling elements placed along the tank track. Refining in the app. with 1 electrode and heater is demonstrated on NaOH.H₂O (I) (1200 g, m.p. 68.degree.) contg. 6 .times. 10-3% Fe which by 10 zone passages and electrolyses with a rotating anode (c.d. 7 mA/cm²) followed by 8 zone passages without electrolysis gave 525 g I contg. 10-6% Fe. The same procedure without electrolysis gave 230 g I contg. 5 .times. 10-6% Fe. The zone width and transport velocity were 5 cm and 0.6 cm/hr, resp., in both cases.